AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-7 (Cancelled)

8. (Withdrawn) A method of detecting the presence of disease in a patient comprising:

i) obtaining a biological sample from said patient; and

ii) screening said sample for a mutant α_{1a}AR,

the presence in the sample of said mutant α_{1a}AR being indicative of the presence of disease or predisposition to disease.

9. (Withdrawn) The method according to claim 8 wherein the sample is a biological fluid or tissue sample.

10. (Withdrawn) The method according to claim 9 wherein said sample is a biological fluid and said fluid is plasma, serum, urine, lung lavage, ascites fluid, saliva or cerebrospinal fluid.

11. (Withdrawn) The method according to claim 9 wherein said sample is a tissue sample.

12. (Withdrawn) The method according to claim 8 wherein said screening is effected by contacting said sample with a compound that forms a complex with said mutant α_{1a}AR under conditions such that the complex can form, and determining whether any such complex forms.

13. (Withdrawn) The method according to claim 12 wherein said compound is a binding protein.

14. (Withdrawn) The method according to claim 13 wherein said binding protein is an antibody or binding fragment thereof.

15. (Withdrawn) The method according to claim 8 wherein said disease is a cardiovascular disease, a psychiatric disease, or cancer.

16. (Withdrawn) The method according to claim 15 wherein said disease is hypertension, atherosclerosis, or myocardial hypertrophy.

17. (Withdrawn) The method according to claim 8 wherein said disease is benign, prostatic hypertrophy.

18. (Withdrawn) An isolated antibody specific for a mutant α_{1a}AR.

19. (Withdrawn) The antibody according to claim 18 wherein said antibody is a monoclonal antibody.

20. (Withdrawn) A kit for use in the detection of a mutant α_{1a}AR comprising a compound that specifically binds to said mutant α_{1a}AR disposed within a container means.

21. (Withdrawn) A method of detecting disease in a patient comprising contacting a biological sample from said patient with at least one mutant α_{1a}AR under conditions such that said mutant α_{1a}AR can bind to autoantibodies thereto present in said sample to form a complex, and detecting the presence of said complex,

wherein the presence of said complex is indicative of disease or predisposition to disease.

22. (Withdrawn) The method according to claim 21 wherein said disease is a cardiovascular disease, a psychiatric disease, or cancer.

23. (Withdrawn) The method according to claim 22 wherein said disease is hypertension, atherosclerosis, or myocardial hypertrophy.

24. (Withdrawn) The method according to claim 21 wherein said disease is benign, prostatic hypertrophy.

25. (New) A method of detecting disease in a patient comprising screening DNA present in a sample from said patient for at least one mutation in the α_{1a}adrenergic receptor

(α_{1a}AR) gene, the presence of said mutation being indicative of disease or predisposition to disease,

wherein said at least one mutation is at least one point mutation that results in an amino acid substitution in a transmembrane (TM) helix or intracellular loop (IL) of α_{1a}AR.

26. (New) The method according to claim 25 wherein said TM helix is TM 4, TM 5 or TM 7 and wherein said IL is the third IL.

27. (New) The method according to claim 25 wherein said at least one mutation is in a TM helix.

28. (New) The method according to claim 27 wherein said at least one mutation is alanine for serine^{154} (S154A), lysine for arginine^{166} (R166K), serine for isoleucine^{200} (I200S) or isoleucine for valine^{311} (V311I).

29. (New) The method according to claim 25 wherein said at least one mutation is in an IL.

30. (New) The method according to claim 29 wherein said mutation is arginine for glycine^{247} (G247R).

31. (New) A method of detecting disease in a patient comprising screening DNA present in a sample from said patient for at least one mutation in the α_{1a}AR gene, the presence of said mutation being indicative of disease or predisposition to disease,

wherein said at least one mutation is at least one point mutation that results in an amino acid substitution in a portion of α_{1a}AR other than the C-terminus of α_{1a}AR.

32. (New) The method according to claim 31 wherein said point mutation results in substitution of an amino acid N-terminal to residue 347.

33 (New) The method according to claim 25 wherein said disease is a cardiovascular disease, a psychiatric disease, or cancer.

34 (New) The method according to claim 33 wherein said disease is hypertension, atherosclerosis, or myocardial hypertrophy.

35. (New) The method according to claim 25 wherein said disease is benign, prostatic hypertrophy.